REMARKS

Claims 19 to 22 are added, and therefore claims 1 to 3, 6 to 8, 10 to 12, and 15 to 23 are pending.

It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Claims 1 to 3, 6 to 8, 10 to 12, and 15 to 18 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication No. 2004/0048142 ("Marusak"), in view of U.S. Patent No. 6,690,140 ("Larson"), in further view of U.S. Patent No. 5,739,737 ("Hatton").

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claim 1 relates to a vehicle electrical system powered by a battery to supply a plurality of loads. The vehicle electrical system of claim 1 includes an integrated module positioned between a positive terminal of the battery and the plurality of loads, the integrated module having a terminal at which a generator is connectable, and in which *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*.

The Marusak, Larson, and Hatton references do not disclose (or even suggest) the feature that the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator, as provided for in the context of claim 1.

The Office Action admits at page 3 that the Marusak reference does not teach or suggest the feature of "an electronics unit for regulation of the generator," but conclusorily asserts that the feature of "an electronics unit for at least one of diagnosis of the generator" is found in paragraphs 10 and 29 of the Marusak reference, stating that "diagnos[is] of the battery ... is effectively the same as diagnosis of the generator." However, the Marusak reference merely refers to measuring a condition of a battery and comparing that measured battery condition to maximum operating parameters of the battery. (Marusak, ¶ [0010]). The Marusak reference does not disclose diagnosing a generator, as provided for in the context of the claimed subject matter. Instead, the Marusak reference merely refers to diagnosing a battery, which the Office Action assumes without reason is the same as diagnosing a generator.

In this regard, the Office Action at page 8 erroneously contends that "to diagnose the 'battery's maximum operating parameters' ... is to diagnose the output of the generator." However, a measured battery condition does not provide a direct indication of a condition of a generator. For example, it is possible for a generator to be perfectly operational, while other components of a vehicle electrical system may cause adverse changes to the measured battery condition. Accordingly, diagnosing a battery may merely lead to possible, unvalidated assumptions regarding the condition of a generator, but clearly is not the same as diagnosing a generator. Further, the Office Action at page 8 merely asserts that "to diagnose the [battery] ... is to diagnose the output of the generator." (emphasis added), but simply diagnosing or measuring the output of the generator is not the same as diagnosing the generator itself. Therefore, the Marusak reference does not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

Further, the Larson reference also does not disclose (or even suggest) the feature that the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator, as provided for in the context of claim 1. The Office Action at pages 3 to 4 asserts that Larson discloses this feature, stating "col. 3 lines

43-53 describes how ESC 30, in combination with other controllers, execute a battery management program that regulates and diagnoses the battery/pack by making adjustments to the generator output. Since the battery is directly connected to the generator, the generator output is also effectively diagnosed." However, the Larson reference does not disclose (or even suggest) regulation of a generator and diagnosis of a generator. The Larson reference merely refers to a conventional alternator which provides a constant voltage D.C. output. (Larson, col. 3, lines 63 to 64; col. 5, lines 31 to 37; Figures 2 and 3, elements 15 and 115). Nowhere does the Larson reference indicate that its ESC regulates the alternator and diagnoses the alternator.

Instead, the Larson reference only states that "a controllable voltage regulator 21 [is] used for regulating the recharging of battery pack 25." (Larson, col. 3, lines 41 to 42). The Larson reference merely refers to a controllable voltage regulator that receives constant voltage from the alternator and controls the voltage sent to the battery for recharging. (Larson, col. 4, lines 25 to 40; col. 6, lines 47 to 49; and col. 6, lines 56 to 60). Thus, the Larson reference merely refers to regulating the voltage supplied to the battery, but does not disclose regulating the alternator itself, which operates in a conventional manner by outputting a constant D.C. voltage. Further, the Larson reference merely refers to diagnosing a battery, but does not disclose diagnosing the alternator itself. (Larson, col. 3, line 49). As explained above, simply diagnosing a battery is not the same as diagnosing the alternator itself, as the condition of the battery is not necessarily indicative of the condition of the alternator. Thus, nowhere does the Larson reference refer to an electronics unit for at least one of regulation of the generator and diagnosis of the generator, as provided for in the context of claim 1.

In addition, the Office Action at pages 3 to 4 states that the Larson reference discloses "regulat[ing] and diagnos[ing] the battery/pack by making adjustments to the generator output. Since the battery is directly connected to the generator, the generator output is also effectively diagnosed." As explained above, simply diagnosing or measuring the output of the generator is not the same as diagnosing the generator itself. Therefore, the Larson reference does not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

Moreover, the Larson reference specifically teaches away from this claim feature of claim 1. The Larson reference requires a constant voltage D.C. output from the alternator,

and refers to several voltage regulators that separately modify the constant voltage received from the alternator and supply each of low voltage, intermediate voltage, and high voltage systems independently of one another. (Larson, col. 3, lines 6 to 15). Thus, the Larson reference requires a constant voltage D.C. output from the alternator in order to be able to simultaneously provide modified voltage levels to each of the supplied systems. For this additional reason, it is respectfully submitted that the Larson reference does not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

In addition, the Hatton reference does not disclose (or even suggest) the feature that the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator, as provided for in the context of claim 1. As explained above, the Marusak and Larson references do not disclose (or even suggest) all of the features of claim 1. The Hatton reference does not cure - and is not asserted to cure - the critical deficiencies of the Marusak and Larson references.

Therefore, the proposed combination of the Marusak, Larson, and Hatton references does not render unpatentable claim 1 for at least the reasons provided above. Accordingly, it is respectfully submitted that claim 1 is allowable. Claims 2, 3, 6 to 8, 10 to 12, and 15 to 18 ultimately depend from claim 1, and are therefore allowable for at least the same reasons as claim 1.

Withdrawal of the rejections of the claims is therefore respectfully requested.

Claims 19 to 22 do not add any new matter and are supported by the present application including the specification. Claim 19 includes features like those of claim 1 (as well as further features) and is therefore allowable at least for the same reasons as claim 1, and also because its further features are not disclosed nor suggested by the applied references. Claims 20 to 22 include features like those of claim 19 (as well as further features) and are therefore allowable at least for the same reasons as claim 19, and also because its further features are not disclosed nor suggested by the applied references.

In sum, claims 1 to 3, 6 to 8, 10 to 12, and 15 to 22 are allowable.

CONCLUSION

It is therefore respectfully submitted that all of the presently pending claims 1 to 3, 6 to 8, 10 to 12, and 15 to 22 are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn, since all issues raised have been addressed and obviated. An early and favorable action on the merits is therefore respectfully requested.

Respectfully submitted,

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